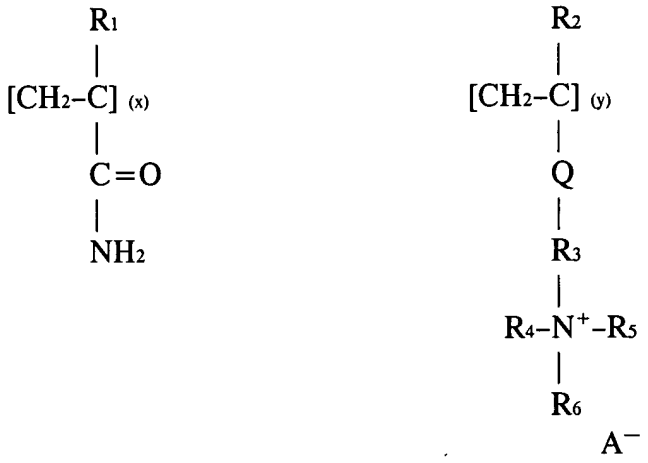
IN THE CLAIMS

1. (Currently Amended) Improved method for preparing a cross-linked water soluble cationic (meth) acrylamide/quaternary ammonium salt copolymer that is useful as a flocculant, said method comprising 1) initiating polymerization of an aqueous reaction mixture comprising (meth) acrylamide monomers and quaternary ammonium salt monomers to convert said monomers into a copolymer containing reaction mixture comprising cationic poly (meth) acrylamide/quaternary ammonium salt copolymer; and 2) cross-linking said copolymer by addition of a cross-linking agent to said copolymer containing reaction mixture; wherein said step of 2) cross-linking comprises waiting until about 50% or more of said monomers have been converted into said copolymer and then continuously adding between about 1 ppm to about 500 ppm of said cross-linking agent to said copolymer containing reaction mixture based on the total amount of said reaction mixture in the absence of concurrent addition of any chain transfer agent to said copolymer containing reaction mixture.

2. (Original) Improved method as recited in claim 1 wherein in step 1) no chain branching or chain transfer agent is added to said aqueous reaction mixture.

3. (Original) Improved method as recited in claim 1 wherein said cationic poly (methacrylamide)/quaternary ammonium salt copolymer has repeat units of the formula



wherein Q is -C(O)O-, -OC(O)-, or -C(O)NH-, R_3 is branched or linear (C_1-C_4) alkylene; R_4, R_5 and R_6 are independently chosen from H, C_1–C_4 linear or branched alkyl, or an C_5–C_8 aromatic or alkylaromatic group; A is an anion selected from Cl^-, Br^-, HSO_4^-, or $MeOSO_3^-$.

4. (Original) Improved method as recited in claim 3 wherein the molar ratio of repeat units (x):(y) is from about 80-20(x): 20-80(y).

5. (Original) Improved method as recited in claim 4 wherein the molar ratio of repeat units (x):(y) is from about 60-40(x): 40-60(y).

6. (Original) Improved method as recited in claim 3 wherein said repeat unit y is AETAC.

7. (Original) Improved method as recited in claim 3 wherein said repeat unit y is MAPTAC.

8. (Original) Improved method as recited in claim 3 wherein said repeat unit y is METAC.

9. (Original) Improved method as recited in claim 1 wherein said copolymer is water-soluble and has a molecular weight of about 10,000 - 20,000,000.

10. (Original) Improved method as recited in claim 9 wherein said copolymer has a molecular weight of greater than about 1,000,000.

11. (Original) Improved method as recited in claim 10 wherein said copolymer is acrylamide/AETAC and wherein the motor ratio of acrylamide: AETAC is about 60:40.

12. (Original) Improved method as recited in claim 11 wherein said cross-linking agent is N,N'-methylenebisacrylamide.

13. (Original) Method of dewatering an aqueous suppression of the type including organic matter dispersed therein, said method comprising adding from about 1-2,000 ppm of a cross-linked water soluble cationic (meth)acrylamide/quaternary ammonium salt copolymer made in accordance with claim 1 to said aqueous suspension, based upon one million parts of said suspension, forming flocs containing said organic matter and separating said flocs from said aqueous system.

14. (Original) Method as recited in claim 13 wherein said aqueous suspension is contained within a centrifuge and said organic matter is oily sludge, said cross-linked water soluble cationic (meth)acrylamide/quaternary salt copolymer comprising a copolymer selected from the group

consisting of acrylamide/AETAC; acrylamide /MAPTAC; and acrylamide/METAC copolymers and wherein said separating comprises centrifugal separation.

15. (Original) Method as recited in claim 14 wherein said water soluble cationic (meth)acrylamide/quaternary salt copolymer is acrylamide/AETAC.

16. (Original) Improved method as recited in claim 1 wherein said step 2) comprises waiting until about 75% or more of said monomers have been converted into said copolymer and then continuously adding said cross-linking agent to said copolymer containing reaction mixture in the absence of concurrent addition of any chain transfer agent to said copolymer containing reaction mixture.

17. (Original) Improved method as recited in claim 16 wherein said step 2) comprises waiting until about 80% or more of said monomers have been converted into said copolymer and then continuously adding said cross-linking agent to said copolymer containing reaction mixture in the absence of concurrent addition of any chain transfer agent to said copolymer containing reaction mixture.